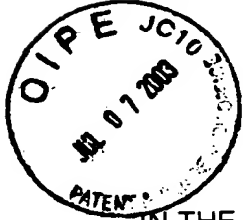


920476-904934




IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

IN THE APPLICATION OF : Keane, Michael
SERIAL NO : 09/881,441
FILED : June 14, 2001
FOR : Measuring Speech Quality
EXAMINER : Harper, Vincent P
GROUP ART UNIT : 2654
DOCKET NO : 476-2037

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Technology Center 2600

I hereby certify that this correspondence is being transmitted to the above -
identified examiner at the United States Patent and Trademark Office (703)
872-9314 on July 1, 2003
Name of person signing Jennifer J. Ramirez
Signature 

SUBMISSION OF SUPPLEMENTAL (CORRECTED) APPENDIX

Honorable Director of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

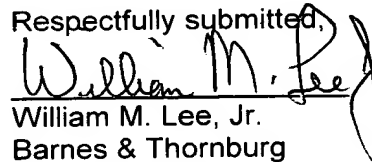
Dear Sir,

In accordance with the telephone conversations on July 1, 2003 between examiner Harper and the undersigned, appended hereto is a supplemental appendix for the Appeal Brief, having the claims properly corrected.

This paper is being submitted in triplicate.

July 1, 2003

Respectfully submitted,


William M. Lee, Jr.
Barnes & Thornburg

P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)

SUPPLEMENTAL APPENDIX A

1. A method of measuring the speech quality of a voice call between a first node and a second node in a packet-based communications network, each of the first and second nodes comprising the same stored test voice information, the method comprising the steps of, at the first node:
 - (i) receiving packets for the voice call and adding at least part of the stored test voice information to at least some of the packets;
 - (ii) forwarding the packets to the second node;
 - (iii) at the second node, accessing the stored test voice information at the second node and comparing it with the test voice information received in the packets using a speech quality assessment algorithm in order to obtain a measure of speech quality for the voice call.
2. A method as claimed in claim 1 wherein some of the packets received at the first node comprise voice information associated with the voice call and others of those packets are associated with periods when speech is absent from the voice call and wherein said step (i) further comprises identifying those packets which are associated with periods when speech is absent from the voice call and adding test voice information to one or more of those packets.
3. A method as claimed in claim 1 wherein said packet-based communications network is an Internet protocol communications network.
4. A method as claimed in claim 1 wherein said voice call comprises a real-time transport protocol session between the first and second nodes.
5. A method as claimed in claim 2 which further comprises making an indication in a header of each of those packets to which test voice information is added.
6. A method as claimed in claim 5 wherein said indication is a payload value and said packets are real-time transport protocol packets.

7. A method as claimed in claim 1 which further comprises, at the second node, identifying which of the packets comprise test voice information by determining whether a pre-specified identifier is present in a header of each of the packets.
8. A method as claimed in claim 7 wherein the packets are forwarded from the first node to the second node via one or more other nodes which do not have access to information about the pre-specified identifier.
9. A method as claimed in claim 1 wherein said first and second nodes are located substantially at the edge of the communications network.
10. A method as claimed in claim 1 wherein said speech quality assessment algorithm is a PESQ algorithm.
11. A signal for a voice call provided over a packet-based communications network, said signal comprising a plurality of packets at least some of which comprise test voice information for comparison at a node with stored test voice information which is the same as the test voice information.
12. A signal as claimed in claim 11 wherein some of the packets are associated with periods when speech is absent from the voice call and comprise test voice information.
13. A signal as claimed in claim 11 wherein the packets are real-time transport protocol packets and some of the packets comprise a header with an indicator, indicating that those packets comprise test voice information.
14. A packet-based communications network node arranged to enable speech quality to be measured for a voice call which is ongoing between a caller and a called party wherein the caller and the called party each have stored test voice information said node comprising:

- (i) an input arranged to receive packets for the voice call; and
 - (ii) a processor arranged to add test voice information to one or more of the packets;
 - (iii) an output arranged to forward the packets towards the called party for comparison of the test voice information with the stored test voice information of the called party to provide a measure of said speech quality.
15. A network node as claimed in claim 14 wherein some of the packets received at the input comprise voice information associated with the voice call and others of those packets are associated with periods when speech is absent from the voice call and wherein the processor is further arranged to identify those packets which are associated with periods when speech is absent from the voice call and add test voice information to one or more of those packets.
16. A packet-based communications network node arranged to measure speech quality for a call which is ongoing between a caller and a called party, said node comprising:
- (i) an input arranged to receive packets as part of the voice call some of which comprise voice information associated with the voice call and some of which comprise received test voice information;
 - (ii) stored test voice information;
 - (iii) a processor arranged to compare the received test voice information and the stored test voice information using a speech quality assessment algorithm in order to obtain a measure of speech quality for the voice call
17. A communications network comprising a first packet-based communications network node arranged to enable speech quality to be measured for a voice call which is ongoing between a caller and a called party wherein the caller and the called party each have stored test voice information, said node comprising:

- (i) a first input arranged to receive packets for the voice call; and
- (ii) a first processor arranged to add test voice information to one or more of the packets;
- (iii) a first output arranged to forward the packets towards the called party for comparison of the test voice information with the stored test voice information of the called party to provide a measure of said speech quality;

and a second packet-based communications network node arranged to measure speech quality for a call which is ongoing between a caller and a called party, said node comprising:

- (i) a second input arranged to receive packets as part of the voice call some of which comprise voice information associated with the voice call and some of which comprise received test voice information;
- (ii) stored test voice information;
- (iii) a second processor arranged to compare the received test voice information using a speech quality assessment algorithm in order to obtain a measure of speech quality assessment algorithm in order to obtain the measure of speech quality for the voice call.

18. A method of measuring speech quality for a call which is ongoing, said method comprising, at a node in a packet based communications network:

- (ii) receiving packets as part of the voice call some of which comprise voice information associated with the voice call and some of which comprise received test voice information;
- (iii) accessing stored test voice information at the node;
- (iv) comparing the received test voice information and the accessed stored test voice information using a speech quality assessment algorithm in order to obtain a measure of speech quality for the voice call.

19. A method of enabling speech quality to be measured for a voice call which is ongoing between a caller and a called party said method comprising, at a node in a packet based communications network:
- (v) receiving packets for the voice call;
 - (vi) adding test voice information to one or more of the packets; and
 - (vii) forwarding the packets towards the called party;
 - (viii) at the called party node extracting the received test voice information and comparing it with stored test voice information at said called party node to provide a measure of said speech quality.
20. A computer program for controlling a packet-based communications network node in order to enable speech quality to be measured for a voice call which is ongoing between a caller and a called party said computer program being arranged to control the node such that:
- (i) packets for the voice call are received;
 - (ii) test voice information is added to one or more of the packets; and
 - (iii) the packets are forwarded towards the called party.
 - (iv) at the called party node the received test voice information is compared with stored test voice information at said called party node to provide a measure of said speech quality.
21. A computer program arranged to control a packet-based communications network node in order to measure speech quality for a call which is ongoing between a caller and a called party, said computer program being arranged to control the node such that:
- (v) packets are received as part of the voice call some of which comprise voice information associated with the voice call and some of which comprise received test voice information;
 - (vi) stored test voice information at the node is accessed; and
 - (vii) the received test voice information and the stored test voice information are compared using a speech quality assessment

algorithm in order to obtain a measure of speech quality for the voice call.

22. A computer program as claimed in claim 21 which is stored on a computer readable medium.
23. A computer program as claimed in claim 20 which is stored on a computer readable medium.